Amendment to the Claims

1 – 27 (Canceled).

28 (Withdrawn). An optical network, comprising:

a plurality of connected devices, each of said plurality of devices operable to perform at least one of adding wavelengths within the network, dropping wavelengths within the network, regenerating wavelengths within the network, and providing for the passage of wavelengths therethrough;

a first of said plurality of connected devices operable to insert a wavelength within the network and send it to a second of said plurality of connected devices, and said first of said plurality of connected devices is further operable to send information related to the inserted wavelength to the second of said plurality of connected devices;

said information related to the inserted wavelength including data identifying the inserted wavelength and the identification of the first of said plurality of connected devices; and

said second of said plurality of connected devices operable to insert a wavelength within the network, and further operable to make a determination if the inserted wavelength by the second of said plurality of connected devices is equal to the wavelength inserted into the network by said first of said plurality of connected devices, wherein said second of said plurality of connected devices determines the wavelength inserted into the network by said first of said plurality of connected devices is a passthrough wavelength for the second of said plurality of devices when the inserted wavelengths are not equal.

29 (Withdrawn). The optical network as recited in claim 28, wherein said second of said plurality of connected devices further operable to make a determination if a connection with said first of said plurality of connected devices is a cross-connection.

30 (Withdrawn). The optical network as recited in claim 29, wherein said second of said plurality of connected devices further operable to provide for the passage of the wavelength received from said first of said plurality of connected devices to a third of said plurality of connected devices.

31 (Withdrawn). The optical network as recited in claim 30, wherein said second of said plurality of connected devices is further operable to provide for the passage of said information related to the inserted wavelength of the first of said plurality of connected devices to said third of said plurality of connected devices.

32 (Currently Amended). An optical network element in an optical wavelength division multiplexed (WDM) ring network, the optical network element comprising:

a plurality of transponders for generating a plurality of wavelengths inserted ~~transmitted~~ in a first direction ~~to an adjacent network element~~ over the optical WDM ring network, wherein at least one of the plurality of wavelengths inserted in the first direction is received by the network element in a second direction from another network element in the optical WDM ring network to form a cross-connection;

a receiver ~~dedicated overhead wavelength channel~~ for receiving a wavelength topology map over a dedicated overhead wavelength channel from an ~~the~~ adjacent network element in the optical WDM ring network, wherein the wavelength topology map includes a map portion that specifies the wavelengths inserted ~~being transmitted~~ by the adjacent network element in a second direction to the network element;

wherein the ~~said optical~~ network element is operable to determine passthrough wavelengths from the wavelength topology map.

33 (Currently Amended). The optical network element of claim 32, wherein the ~~said~~ network element is operable to determine passthrough wavelengths from the wavelength topology map and from the wavelengths generated by the plurality of transponders and inserted ~~transmitted~~ in a first direction over the optical WDM ring network by the network element.

34 (Currently Amended). The optical network element of claim 33, wherein the network element is operable to determine passthrough wavelengths in response to comparing the wavelengths inserted ~~transmitted~~ in a first direction by the network element ~~are not equal~~ to the wavelengths specified in the wavelength topology map as inserted ~~being transmitted~~ by the adjacent network element in a second direction to the network element.

35 (Currently Amended). The optical network element of claim 33, wherein the network element is operable to determine passthrough wavelengths in response to comparing ~~the~~ wavelengths being dropped from the ~~a~~ second direction by the network element ~~are not equal~~ to the wavelengths specified in the wavelength topology map as inserted ~~being transmitted~~ by the adjacent network element in the ~~a~~ second direction to the network element.

36 (Currently Amended). A method for determining passthrough wavelengths in an optical network element in an optical wavelength division multiplexed (WDM) ring network, comprising:

inserting in a first direction a first set of wavelengths over the optical WDM ring network;

receiving in a second direction one of the first set of the wavelengths over the optical WDM ring network from another network element in the optical WDM ring network to form a first cross-connection;

inserting in a second direction a second set of wavelengths over the optical WDM ring network;

receiving in a first direction one of the second set of wavelengths over the optical WDM ring network from another network element in the optical WDM ring network to form a second cross-connection;

receiving a first wavelength topology map from a ~~the~~ first adjacent network element in the optical WDM ring network over a dedicated overhead wavelength channel, wherein the first wavelength topology map includes a first map portion that specifies ~~the~~ wavelengths inserted ~~being transmitted~~ by the first adjacent network element in the ~~a~~ first direction to the network element;

receiving a second wavelength topology map from a second adjacent network element in the optical WDM ring network over a dedicated overhead wavelength channel, wherein the second wavelength topology map includes a second map portion that specifies ~~the~~ wavelengths inserted ~~being transmitted~~ by the second adjacent network element in a second direction to the network element;

determining passthrough wavelengths in response to determining wavelengths inserted ~~transmitted~~ in a first direction by the network element are not equal to wavelengths specified in the second wavelength topology map as inserted ~~transmitted~~ by the second adjacent network element in a second direction to the network element; and

determining passthrough wavelengths in response to determining wavelengths inserted ~~transmitted~~ in a second direction by the network element are not equal to wavelengths specified in the first wavelength topology map as inserted ~~transmitted~~ by the first adjacent network element in a first direction to the network element.

37 (Currently Amended). The method of claim 36, further comprising:

generating by a first plurality of transponders ~~transmitting~~ wavelengths in the first direction to the second adjacent network element over the optical WDM ring network; and

generating by a second plurality of transponders ~~transmitting~~ wavelengths in a second direction to the first adjacent network element over the optical WDM ring network.